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Problem Submissions Leaderboard Discussions Editorial

Bill Gates is on one of his philanthropic journeys to a village in Utopia. He has *N* packets of candies and would like to distribute one packet to each of the *K* children in the village (each packet may contain different number of candies). To avoid any fighting among the children, he would like to pick *K* out of *N* packets, such that *unfairness* is minimized.

Suppose the K packets have $(x_1, x_2, x_3,...,x_k)$ candies in them, where x_i denotes the number of candies in the i^{th} packet, then we define *unfairness* as

$$max(x_1, x_2, ... x_k) - min(x_1, x_2, ... x_k)$$

where *max* denotes the highest value amongst the elements, and *min* denotes the least value amongst the elements. Can you figure out the minimum *unfairness* and print it?

Input Format

The first line contains an integer N.

The second line contains an integer K. N lines follow. Each line contains an integer that denotes the candy in the i^{th} packet.

Output Format

An integer that denotes the minimum possible value of *unfairness*.

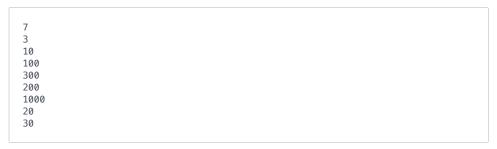
Constraints

1<=*N*<=10⁵

1<=K<=N

0<= number of candies in any packet <=109

Sample Input #00



Sample Output #00

20

Explanation #00

Here K = 3. We can choose packets that contain 10,20,30 candies. The unfairness is



Authored by amititks

6320 hackers have submitted co

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Sample Input #01			
10 4 1 2 3 4 10 20 30 40 100 200			
Sample Output #01			
3			
Explanation #01 Here $K = 4$. We can choose the packets that contain 1,2,3,4 candies. The unfairness is			
max(1,2,3,4) - min(1,2,3,4) = 4 - 1 = 3 Suggest Edits			
Current Buffer (saved locally, editable) & 🔊	PHP	•	K A 1
Upload Code as File Use a custom test case		Run Code	Submit C

 $\max(10,20,30) - \min(10,20,30) = 30 - 10 = 20$